

means of enabling said program to refer to said file by using said file identifying information obtained by said notification, to obtain said massive amount of data.

Sub 8. 8. (Amended) A computer-readable storage medium recorded a program and data in a database system arranged in a client-server manner, said program and data comprising:

a first procedure of enabling a database server operating in said server to output to a file a massive amount of data stored in a database requested by a program operating in a client, and to respond to said request by transmitting said file to said program; and

a second procedure of enabling said program to refer to said file to which said massive amount of data is outputted by said first procedure, to obtain said massive amount of data.

REMARKS

Claims 1-8 are pending in this application. By this Amendment, claims 1-3 and 5-8 are amended. Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version With Markings To Show Changes Made."

The Office Action rejects claims 1-8 under 35 U.S.C. §102(e) by U.S. Patent 5,983,213 to Nakano et al. (hereafter Nakano). The rejection is respectfully traversed.

The present application relates to a database processing method in which the data server may transmit identifying information of stored data, which is stored in a database requested by a program (operating in a client), to the program, and the program may obtain the stored data based on the identifying information of the stored data. The program may

obtain the stored data based on the identifying information (e.g., the external file 152-1 shown in Fig. 1) of the stored data which the data server transmits to the program.

Independent claim 1 recites a first process of enabling a database server operating at a server to store data, which is stored in a database requested by a program operating at a client, to a common storage area other than a storage area to which the database is stored, and to respond to said request by transmitting an identifying information of the stored data to the program. Independent claim 1 further recites a second process of enabling the program to refer to the common storage area based on the identifying information of the stored data, to obtain the stored data.

In contrast, Nakano utilizes a database processing method in which the transmissions/reception of data may be performed by specifying a LOB (large object) handle and performing the data transfer from a request accepting server 310 to a transfer requesting source 321. See Fig. 2 and column 14, lines 14-44, for example. When the server performing the transmission and reception of data is the same server, then the LOB data may be directly obtained in the server. See column 20, lines 31-33. However, when the server which performs the transmission and reception of data are different, then the LOB data may be transferred from one of the servers to the other. See column 20, lines 33-35. Accordingly, Nakano does not teach or suggest that a program obtains stored data based on the identifying information of the stored data.

Furthermore, independent claim 1 relates to a common storage area (i.e., of the database server and the program operating at a client). As discussed in the present application, the data may be stored in the common storage area that is common to the nodes (of the database server and the program) and the program may obtain the data stored to the common storage area. Thus, embodiments of the present invention may speed up the process

of passing data from the database server to a user application, may simplify description of source codes used for treating data to be managed by the database in the user application, and provide a technique of speeding up the passing of plural data units between a database server and a user application in a parallel database system. See, for example, page 4, line 26- page 5, line 10 of the present application.

Nakano does not store data to a common storage area but rather utilizes the respective storage areas of the nodes. Thus, Nakano does not suggest the features relating to the common storage area as recited in claim 1. Accordingly, Nakano does not teach or suggest all the features of independent claim 1. Thus, independent claim 1 defines patentable subject matter. Each of claims 6 and 8 define patentable subject matter for at least similar reasons as claim 1. Claims 2-5 depend from claim 1 and claim 7 depends from claim 6 and therefore also define patentable subject matter for at least this reason. Withdrawal of the outstanding rejection is respectfully requested.

Upon filing this application, applicants filed an information sheet in accordance with 37 C.F.R. §1.56(a). This sheet listed three articles that were disclosed in the specification. Their discussion in the specification thereby constituted their statement of relevance. The Examiner is requested to consider these three references and initial the attached sheet as showing the Examiner's consideration of the references. Copies of the references were previously filed on May 24, 1999.

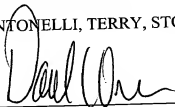
CONCLUSION

In view of the foregoing, it is respectfully submitted that the above identified application is in condition for allowance. Favorable consideration and prompt allowance of claims 1-8 are respectfully requested.

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (500.37238X00).

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP

A handwritten signature in black ink, appearing to read 'David C. Oren', is written over a horizontal line.

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Attachment:
Information Sheet under 37 C.F.R. §1.56(a)

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Claims 13 and 5-8 have been amended as follows:

1. (Amended) A database processing method used in a database system arranged in a client-server manner, comprising:

a first process of enabling a database server operating at a server to [output] store data, which is stored in a database requested by a [user application] program operating at a client, to [an] a common storage area [on a storage device] other than a storage area to which said database is stored, and to respond to said request by transmitting an identifying information of said stored data to said program; and

a second process of enabling said [user application] program to refer to said common storage area [on said storage device to which said data is outputted in said first process] based on said identifying information of said stored data, to obtain said stored data.

2. (Amended) A database processing method as claimed in claim 1, further comprising:

a third process of enabling said database server to create a storage area identifying information for identifying the area on said storage device to which said data is outputted;

a fourth process of notifying said [user application] program of said storage area identifying information from said database server; and

a fifth process of enabling said [user application] program to refer to the area on said storage device using said storage identifying information obtained by said notification to obtain said data.

3. (Amended) A database processing method as claimed in claim 1 further comprising:

a sixth process of enabling said [user application] program to request an execution of a function defined in said database;

a seventh process of enabling said database server to execute said function according to a request from said [user application] program;

an eighth process of enabling said function to create a storage area identifying information of said storage device to which said data is outputted;

a ninth process of enabling said function to output said data to said storage area; and

a tenth process of enabling said function to notify said database server of said storage area identifying information.

5. (Amended) A database processing method as claimed in claim 1, further comprising:

a process of enabling said [user application] program to refer to said storage device to which said data is outputted by said database server, at the same node as a node where said database server is in operation to obtain said data.

6. (Amended) A database processing system used in a database system having a client-server arrangement for treating a massive amount of data, comprising:

first means for enabling a database server operating in a server to output to a file said massive amount of data stored in a database requested by a [user application] program operating in a client, and to respond to said request by transmitting said file to said program; and

second means for enabling said [user application] program to refer to said file where said massive amount of data is outputted by said first means, to obtain said massive amount of data.

7. (Amended) A database processing system as claimed in claim 6, further comprising:

means of enabling said database server to create a file identifying information for identifying said file where said massive amount of data is outputted;

means of notifying said [user application] program of said file identifying information from said database server; and

means of enabling said [user application] program to refer to said file by using said file identifying information obtained by said notification, to obtain said massive amount of data.

8. (Amended) A computer-readable storage medium recorded a program and data in a database system arranged in a client-server manner, said program and data comprising:

a first procedure of enabling a database server operating in said server to output to a file a massive amount of data stored in a database requested by a [user application] program

operating in a client, and to respond to said request by transmitting said file to said program;
and

a second procedure of enabling said [user application] program to refer to said file to which said massive amount of data is outputted by said first procedure, to obtain said massive amount of data.

INFORMATION UNDER 37 CFR 1.56(a)

(For Initial Filing)

The following references are submitted as information to comply with the duty of disclosure under 37 CFR 1.56(a):

References	Disclosed in the specification?		Copy			Translation	
			Enc.	Follow	Please obtain	Enc.	Not available
1. "USING THE NEW DB2 IBM's Object-Relational Database System", Don Chamberlin, Morgan Kaufmann Publishers, Inc., 1996	○		○				
2. "Database Language SQL", ISO Working Draft, July 1996	○		○				
3. "OBJECT RELATIONAL DBMSs", M. Stonebraker, translated by K.OHTA, International Thomas Publishing Japan, August 1996	○		○				
4. JP-A-6-214843	○			○			